

In the Claims:

Please cancel without prejudice or disclaimer claims 11-27, 31-49, 51-54, 59, 61, 63, 68 and 70-71 and please amend claims 10, 50, 55, 60, 62 and 69.

The following listing of claims will replace all previous claims and listings in the application

1. (Original) A porous material comprising a copolymer of at least one hydrophobic monomer and at least one hydrophilic monomer, wherein said copolymer further comprises at least one ion-exchange functional moiety selected from the group consisting of an acyclic secondary amine exclusive of polyethylenimine, a cyclic tertiary amine, a substituted acyclic amine, and a substituted cyclic amine.

2. (Original) The porous material of claim 1, wherein the porous material comprises a porous particle that comprises said copolymer.

3. (Original) The porous material of claim 2, wherein said copolymer is non-sulfonated.

4. (Original) The porous material of claim 2, wherein said substituted acyclic amine or said substituted cyclic amine is substituted by an electron withdrawing group.

5. (Original) The porous material of claim 2 wherein said hydrophobic monomer is divinylbenzene or styrene.

6. (Original) The porous material of claim 2 wherein said hydrophilic monomer is N-vinylpyrrolidone or N-vinyl acetamide.

7. (Original) The porous material of claim 2 wherein said copolymer is a poly(divinylbenzene-co-N-vinylpyrrolidone).

8. (Original) The porous material of claim 2 wherein the hydrophobic monomer is substituted by at least one haloalkyl group, and the ion-exchange functional moiety is formed by reaction of the haloalkyl group with an appropriate starting amine to form an amine selected from the group consisting of an acyclic secondary amine, a cyclic tertiary amine, a substituted acyclic amine, and a substituted cyclic amine.

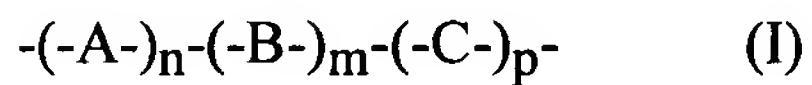
9. (Original) The porous material of claim 8, wherein said haloalkyl is fluoromethyl, chloromethyl, bromomethyl or iodomethyl.

10. (Currently Amended) The porous material of claim 8, wherein the appropriate starting amine is an primary amine selected from the group consisting of methylamine, ethylamine, propylamine, isopropylamine, butylamine, *sec*-butylamine, *iso*-butylamine, *tert*-butylamine, pentylamine, 1,1-dimethylpropylamine, 1,2-dimethylpropylamine, 1-ethylpropylamine, 2-methylbutylamine, isopentylamine, hexylamine, 1,3-dimethylbutylamine, 3,3-dimethylamine, heptylamine, 2-aminoheptane, octylamine, 1,5-dimethylhexylamine, 2-ethylhexylamine, 1-methylheptylamine, *tert*-octylamine, nonylamine, decylamine, undecylamine, dodecylamine, tridecylamine, tetradecylamine, pentadecylamine, hexadecylamine, heptadecylamine, octadecylamine, nonadecylamine, and eicosylamine, azirane, azetane, azolane, azinane, azepane, azocane, azonane, azecane, diazatene, diazolane, diazinane, N-methyldiazinane, diazepane, diazocane, diazonane, diazecane, oxazetane, oxazolane, oxazinane, oxazepane, oxazocane, oxazonane, oxazecane, thiazetane, thiazolane, thiazinane, thiazepane, thiazocane, thiazonane, thiazecane, imidazole, benzylamine, N-methylbenzylamine, N-ethylbenzylamine, N-propylbenzylamine, N-butylbenzylamine, N-pentylbenzylamine, N-hexylbenzylamine, N-heptylbenzylamine, N-octylbenzylamine, N-nonylbenzylamine, N-decylbenzylamine, N-undecylbenzylamine, N-dodecylbenzylamine, N-tridecylbenzylamine, N-tetradecylbenzylamine, N-pentadecylbenzylamine, N-hexadecylbenzylamine, N-heptadecylbenzylamine, N-octadecylbenzylamine, dibenzylamine, aniline, N-methylaniline, N-ethylaniline, N-propylaniline, N-butylaniline, N-pentylaniline, N-hexylaniline, N-heptylaniline, N-octylaniline, N-nonylaniline, N-decylaniline, N-undecylaniline, N-dodecylaniline, N-tridecylaniline, N-tetradecylaniline, N-pentadecylaniline, N-hexadecylaniline, N-heptadecylaniline, N-octadecylaniline, bis(2,2,2-trifluoromethyl)amine, phenethylamine, N-methylphenethylamine, 4-methylphenethylamine, 3-phenylpropylamine, 1-methyl-3-phenylpropylamine, N-isopropylbenzylamine, and 4-phenylbutylamine.

Claims 11 - 27. (Cancelled)

28. (Original) The porous material of claim 1, wherein the porous material comprises a monolith that comprises said copolymer.

29. (Original) A copolymer having the formula I:



and salts thereof,

wherein the order of repeat units A, B and C may be random, block, or a combination of random and block;

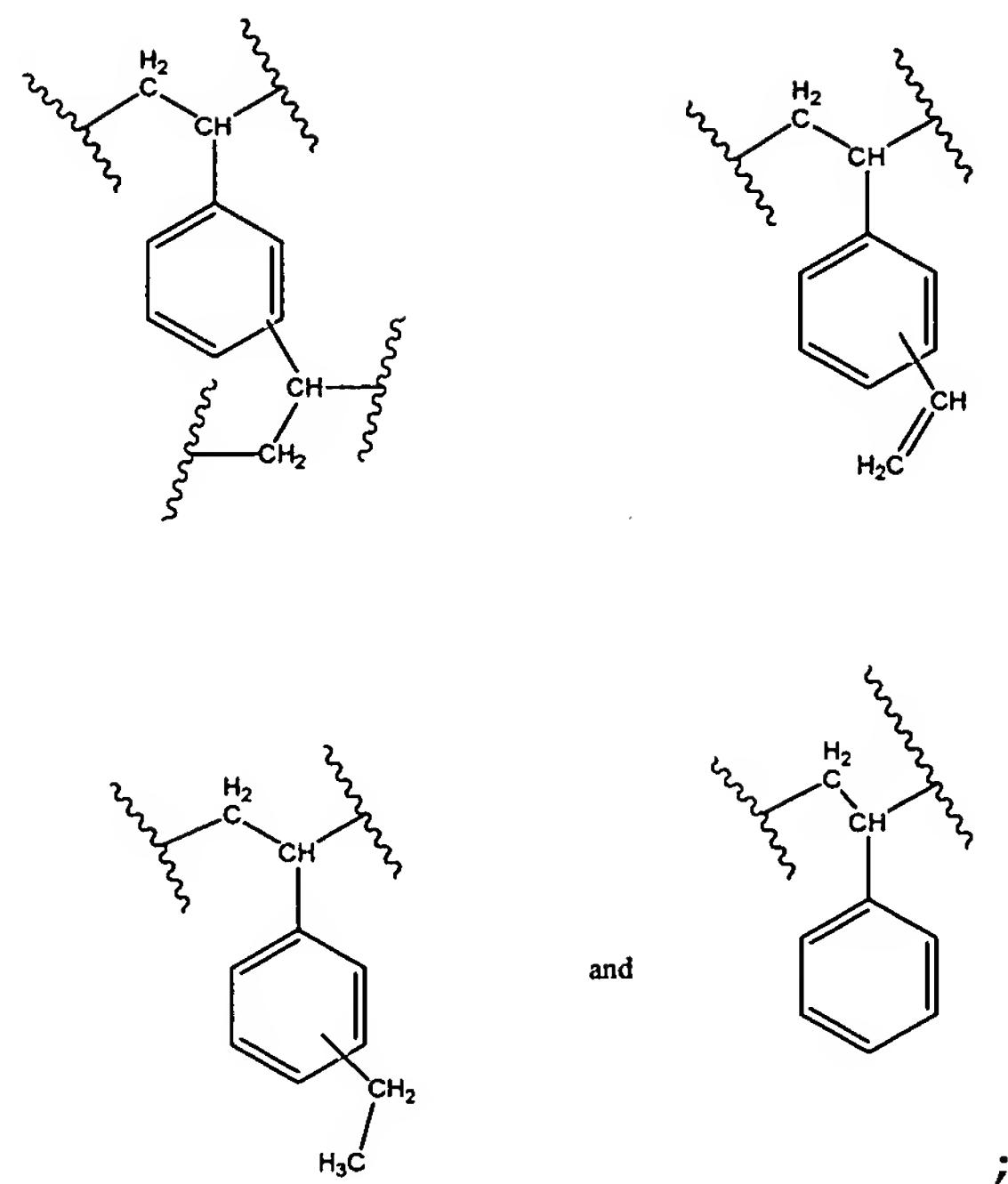
wherein

$$\frac{1}{100} < \frac{(p+n)}{m} < \frac{100}{1}$$

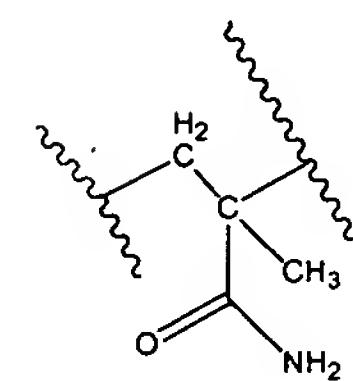
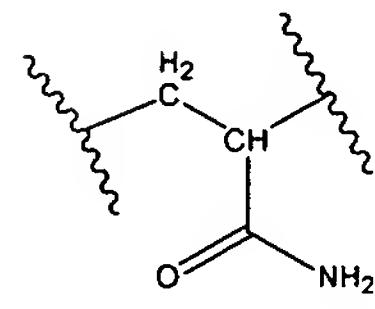
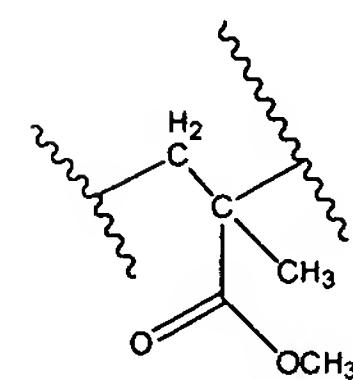
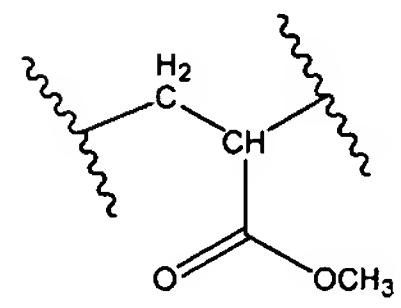
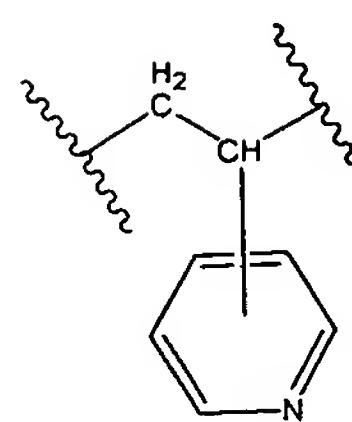
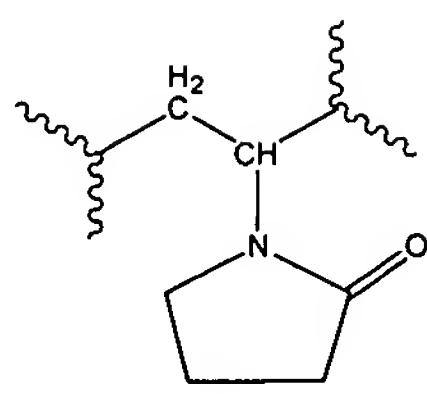
and

$$\frac{1}{500} < \frac{p}{n} < \frac{100}{1}$$

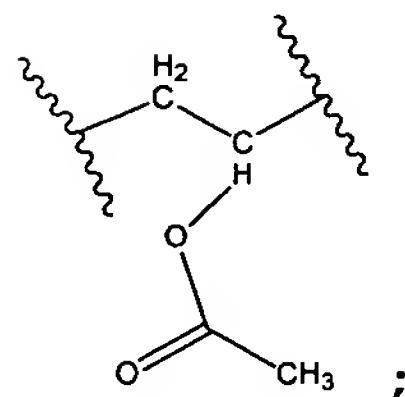
wherein A is selected from the group consisting of



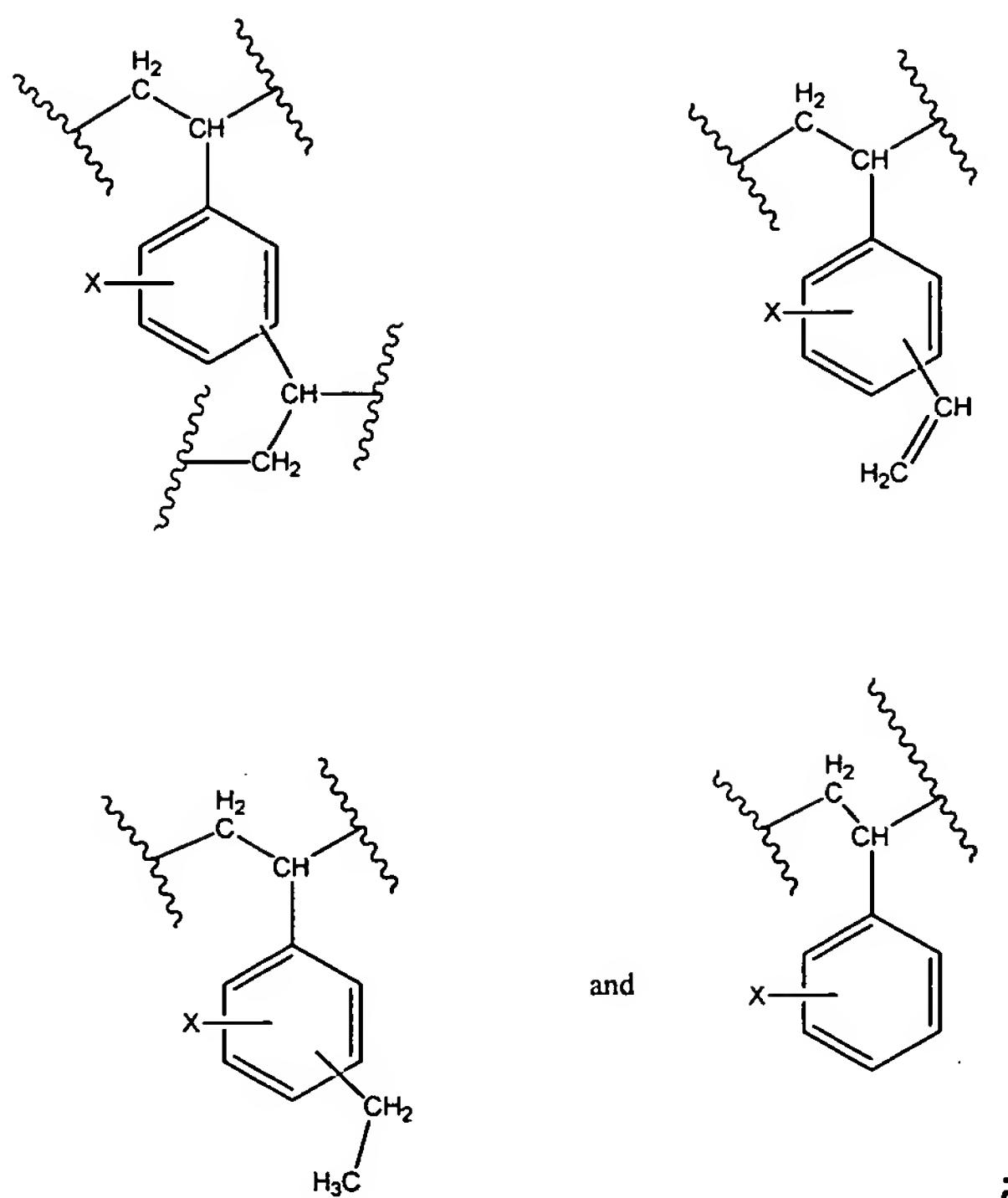
wherein B is selected from the group consisting of



and



wherein C is modified A, wherein modified A is selected from the group consisting of



and

wherein X is $-\text{CR}_1\text{R}_2\text{NR}_3\text{R}_4$ wherein:

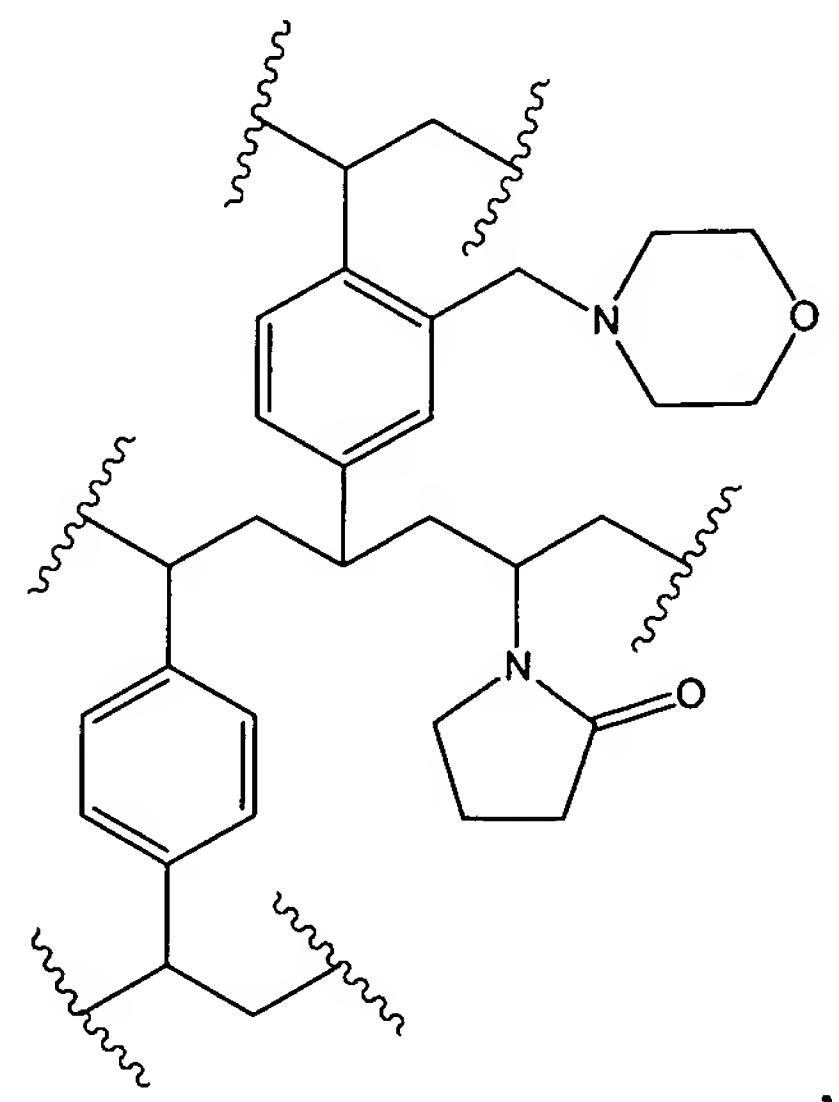
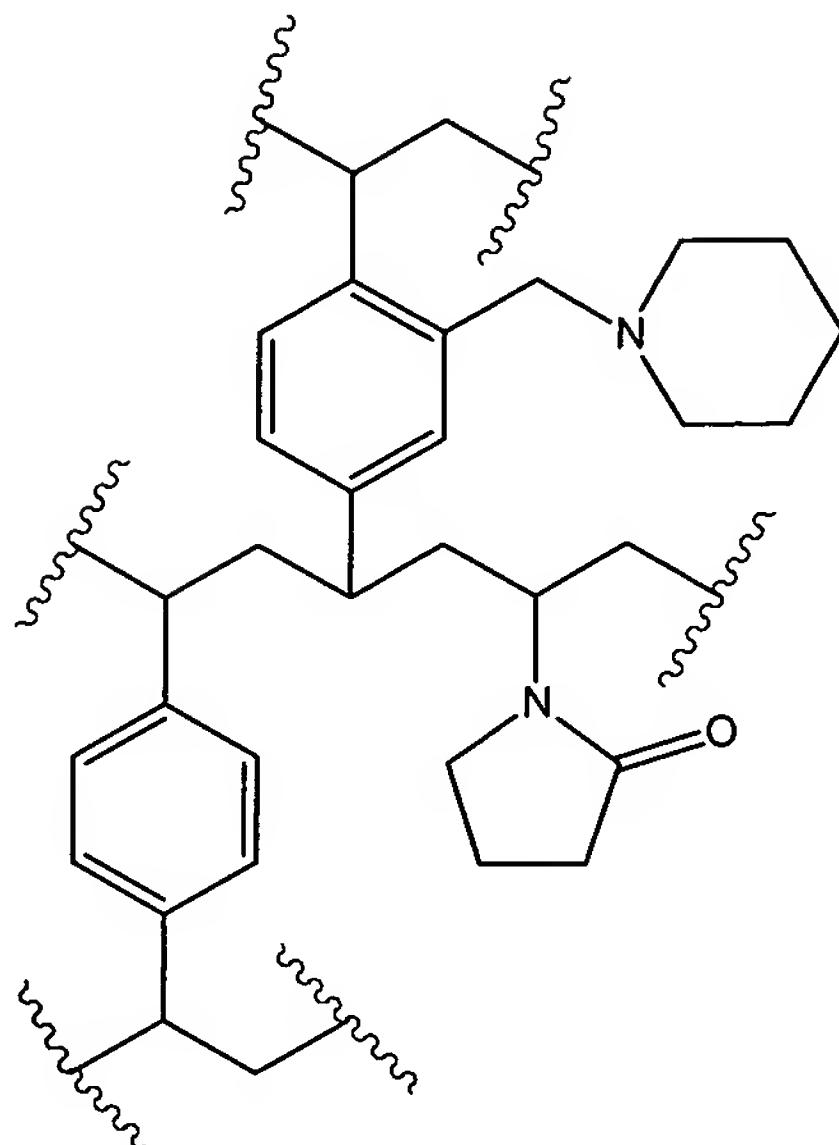
R_1 and R_2 are the same or different and each is hydrogen or $\text{C}_1\text{-C}_6$ alkyl;

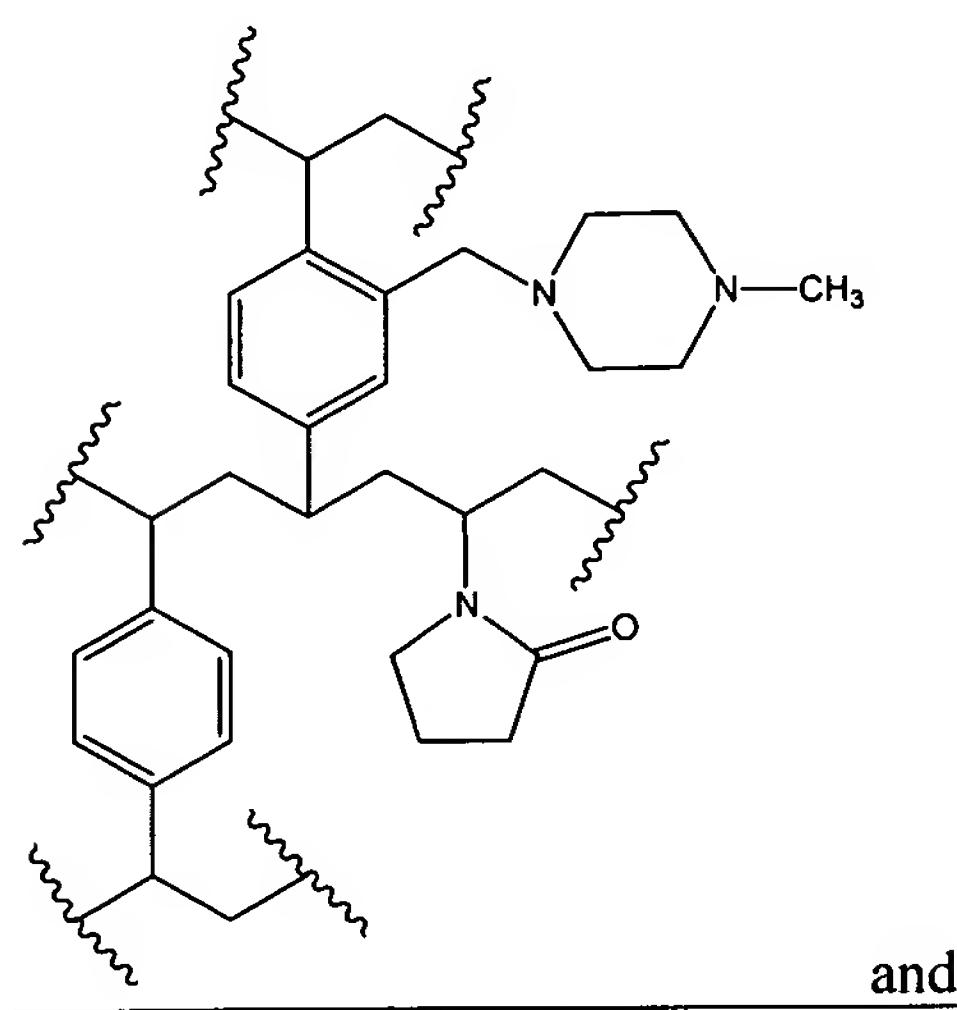
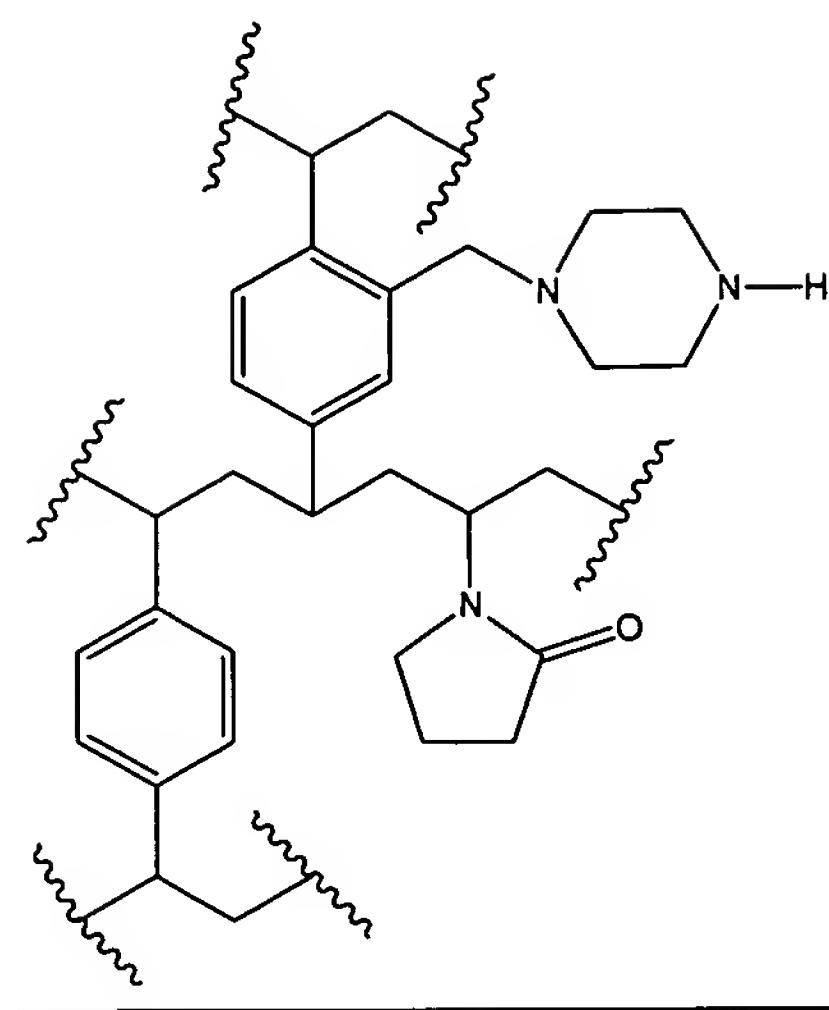
R_3 and R_4 are the same or different and each is hydrogen, an electron withdrawing group, $\text{C}_1\text{-C}_{20}$ alkyl, $\text{C}_1\text{-C}_{20}$ alkyl substituted by an electron withdrawing group, or R_3 and R_4 taken together form a carbocyclic ring or a heterocyclic ring, wherein the carbocyclic ring or heterocyclic ring can be substituted by an electron withdrawing group, provided that (i) R_1 , R_2 , R_3 , and R_4 are not all hydrogen; (ii) if R_1 and R_2 are hydrogen, then R_3 and R_4 are not both unsubstituted $\text{C}_1\text{-C}_{20}$ alkyl; and (iii) if R_1 and R_2 are hydrogen, and either of R_3 and R_4 is hydrogen, then the other of R_3 and R_4 is not polyethylenimine.

30. A porous material comprising the copolymer of claim 29.

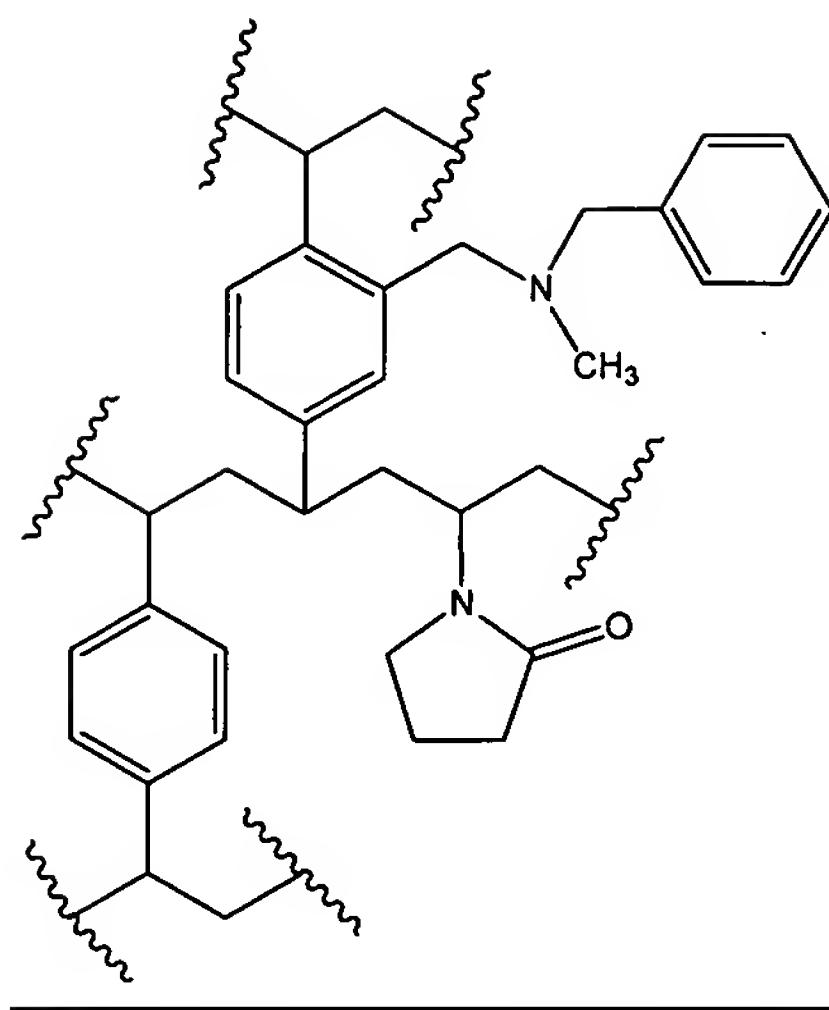
Claims 31 – 49 (Cancelled).

50. (Currently Amended) The copolymer of claim 29 which is selected from the group consisting of





and



Claims 51-54 (Cancelled).

55. (Currently Amended) A porous material comprising the copolymer of any of claim[s] 50-54.

56. (Original) The porous material of claim 55, wherein the porous material comprises a porous particle that comprises said copolymer.

57. (Original) The porous material of claim 55, wherein the porous material comprises a monolith that comprises said copolymer.

58. (Original) A solid phase extraction or chromatography material comprising the porous material of claim 1.

59. (Cancelled)

60. (Currently Amended) A porous particle comprising [a]the copolymer recited in
claim 1 of at least one hydrophobic monomer and at least one hydrophilic monomer, wherein
said porous particle further comprises at least one ion-exchange functional moiety selected

~~from the group consisting of an acyclic secondary amine exclusive of polyethylenimine, a cyclic tertiary amine, a substituted acyclic amine, and a substituted cyclic amine.~~

61. (Cancelled)

62. (Currently Amended) A porous monolith comprising [a]~~the copolymer recited in claim 1~~ of at least one hydrophobic monomer and at least one hydrophilic monomer, wherein said porous particle further comprises at least one ion exchange functional moiety selected from the group consisting of an acyclic secondary amine exclusive of polyethylenimine, a cyclic tertiary amine, a substituted acyclic amine, and a substituted cyclic amine.

63. (Cancelled)

64. (Original) A method for removing or isolating a component from a mixture comprising:

contacting the mixture with a chromatographic material comprising the porous material according to claim 1, to thereby remove or isolate the component from the mixture.

65. (Original) A method for determining the level of a component in a mixture, comprising:

contacting the mixture with a chromatographic material comprising the porous material according to claim 1 under conditions that allow for sorption of the component onto the porous materials;

washing the chromatographic material having the sorbed component with a solvent under conditions so as to desorb the component from the porous materials; and

determining the level of the desorbed component.

66. (Original) A separation device comprising the porous material according to claim 1.

67. (Original) The separation device of claim 66, wherein said device is selected from the group consisting of chromatographic columns, cartridges, thin layer chromatographic plates, filtration membranes, sample clean up devices, solid phase organic synthesis supports, and microtiter plates.

68. (Cancelled)

69. (Currently Amended) The separation device of claim 67, wherein said device comprises [A]a solid phase extraction cartridge comprising the porous material according to claim 1.

Claims 70 – 71 (Cancelled)